

Application No. 10/810,049
Amendment dated January 18, 2006
Reply to Office Action of July 18, 2005

REMARKS

This Amendment is being filed in response to the Office Action dated July 18, 2005. Claims 1-15 are currently pending and stand rejected in the application. Of these, claim 1 is independent. By this Amendment, claims 1 and 11-14 are amended and claims 16-26 are added. Support for the new claims can be found in paragraphs [0013], [0023], [0025] and [0030]. No new matter has been added. Applicants respectfully submit that the amendments to the pending claims have been made without prejudice and solely in order to better clarify the invention and not to limit or narrow the scope of these claims in any way. Applicants respectfully request reconsideration in light of the amendments and comments set forth herein, and respectfully maintain that this application is in condition for allowance.

The Invention as Claimed

Prior to addressing the rejections set forth in the July 18, 2005 Office Action, Applicants take this opportunity to set forth the following brief remarks in connection with their invention, which is directed to a film suitable for use with a photochromic lens and a method of creating such a film.

In general, embodiments of the invention provide a film, or a method of creating a film, for example, a multi-layer interference film suitable for use with photochromic lenses, such as sunglasses. According to an embodiment of the invention, the film has a plurality of dielectric layers, the specific arrangement of which, including the selection of dielectrics as well as the sequence and thickness of deposition of each layer, dictates the appearance of the film. More specifically, rather than providing a clear film, an embodiment of the invention provides a colored film to produce aesthetic effects while not substantially hindering photochromic activity of the photochromic lens upon which the film is deposited.

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One objective that the invention seeks to address is the drawbacks associated with known decorative films applied on lenses that absorb spectral UVA light that is responsible for the activation of the photochromic dyes. Because the decorative films available in the market absorb wavelengths within the range of 315 to 400 nm, they can significantly hinder the lens' photochromic performance.

An embodiment of the invention substantially resolves this issue by providing a colored multi-layer interference film that does not substantially absorb UVA light within the range of 315 to 400nm. Therefore, although the film provides for a decorative film, the film does not substantially hinder the photochromic activity of the photochromic lens upon which the film is deposited. Applicants discovered that by creating a film having specific dielectrics deposited in specific arrangements, this result can be obtained.

Objection to the Drawings

In the Office Action, the Examiner objected to the drawings as not showing every feature of the invention, more specifically, the plurality of dielectric layers. By this amendment, Fig. 7 was added to illustrate an embodiment of the invention comprising a plurality of dielectric layers, and accordingly, Applicants respectfully request withdrawal of the objection.

Objection to the Specification

In the Office Action, the Examiner objected to the disclosure for informalities, which, by this Amendment, Applicants have addressed. A "Brief Description of the Drawings" section has been added, and paragraph [008] was amended to define "UVA" as "ultraviolet". Paragraph [0030] was amended to define "EN1836" as "European Standard EN1836", which is a standard for lenses which provides the minimum activation required of a lens in order for the lens to be considered "photochromic", as described in paragraph [0030]. Accordingly,

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Applicants respectfully submit that the objections have been rendered moot and request withdrawal of the objections.

The Examiner also objected to the specification for lacking proper antecedent basis for the number of dielectric layers up to 100 layers as recited in claim 10. Applicants respectfully draw the Examiner's attention to paragraph [003], wherein it is recited that "coating designs consisting of up to 100 single layers are employed in the production of multi-layer interference filters..." Additionally, the Examiner stated that there is no antecedent basis for the feature related to the activation value of the multi-layer film which is greater than 90% and 97% and equal to the activation value of the photochromic lens as recited in claims 12-14. Applicants respectfully draw the Examiner's attention to Tables 1-3, wherein the activation values of the uncoated photochromic lens and films constructed in accordance with embodiments of the invention are provided. As illustrated, the activation value of the examples were at least equal to that of the uncoated lenses. Therefore, the activation value of the examples were greater than 90%, 97% and equal to the activation value of the uncoated lens, as claimed. Accordingly, Applicants respectfully request withdrawal of the objections.

Objection to the Claims

In the Office Action, the Examiner objected to claims 11-14 for lacking proper antecedent basis for the term "photochromic lens". By this Amendment, claim 1, which claims 11-14 depend from, has been amended to recite "a photochromic lens", and accordingly, Applicants respectfully submit that this objection has now been rendered moot. The Examiner also objected to claim 15 as being unclear regarding the feature "the multi-layer thin film coating has an activation value greater than 25%". Applicants respectfully submit that activation values, as described in the specification, is in percentage form, and therefore, claim 15 recites a

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numerical value greater than 25% as the activation value of the film. Applicants respectfully submit that all objections to the claims have been addressed and request withdrawal of the objections in light of the explanations set forth above.

Rejection Under 35 U.S.C. §102

Claims 1-4, 6 and 9-10 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,661,596 to Biro et al ("Biro"). Applicants respectfully submit that Biro fails to teach or suggest a multi-layer film coating providing a colored appearance and also having a reflectance of less than about 15% of spectral UVA radiation in a range between 315 and 400 nm, as recited in independent claim 1 as amended herein. Rather, Biro is directed to a clear, uncolored antireflective film. Accordingly, Biro does not teach each of the limitations of claim 1. Because the known decorative coatings in the art absorb UVA radiation in the claimed range that activates photochromic dyes, it also would not have been obvious to modify Biro in order to obtain the invention as claimed. Accordingly, Applicants respectfully submit that Biro fails to teach or suggest independent claim 1 and the claims depending therefrom, and further fails to teach or suggest newly added claims 16-26.

Claims 1-4, 6 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,852,974 to Melzig et al ("Melzig"). Applicants respectfully submit that Melzig fails to teach or suggest a multi-layer film coating providing a colored appearance and also having a reflectance of less than about 15% of spectral UVA radiation in a range between 315 and 400 nm, as recited in independent claim 1 as amended herein. Rather, Melzig, like Biro, is directed to a clear, uncolored antireflective film. Accordingly, Melzig does not teach each of the limitations of claim 1. Because the known decorative coatings in the art absorb UVA radiation in the claimed range that activates photochromic dyes, it also would not have been

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obvious to modify Melzig in order to obtain the invention as claimed. Accordingly, Applicants respectfully submit that Melzig fails to teach or suggest independent claim 1 and the claims depending therefrom, and further fails to teach or suggest newly added claims 16-26.

Rejection Under 35 U.S.C. §103(a)

Claims 5, 7, 11 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Biro in view of U.S. Patent No. 6,175,450 to Andreani et al. ("Andreani"). Applicants respectfully assert that Andreani fails to resolve the shortcomings of Biro and fails to teach or suggest a multi-layer film coating providing a colored appearance and also having a reflectance of less than about 15% of spectral UVA radiation in a range between 315 and 400 nm as recited in independent claim 1 as amended herein. Rather, Andreani, like Biro and Melzig, is also directed to a clear film. Andreani fails to teach or suggest colored appearance and therefore fails to remedy the deficiencies of Biro. In sum, neither Biro nor Andreani, taken alone or in combination, teach or suggest each of the limitations of independent claim 1. Accordingly, Applicants respectfully maintain that claims 5, 7, 11 and 15 are patentable over Biro and Andreani.

Claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over Biro. For the reasons set forth above, Applicants respectfully submit that Biro fails to teach or suggest claim 8.

Claims 5, 7, 11 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Melzig in view of U.S. Patent No. 6,175,450 to Andreani et al. ("Andreani"). Applicants respectfully assert that Andreani fails to resolve the shortcomings of Melzig and fails to teach or suggest a multi-layer film coating providing a colored appearance and also having a reflectance of less than about 15% of spectral UVA radiation in a range between 315 and 400 nm

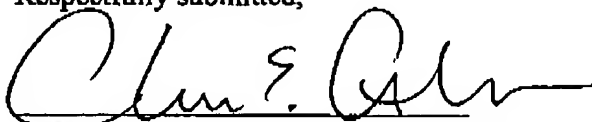
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as recited in independent claim 1 as amended herein. Rather, Andreani, like Biro and Melzig, is also directed to a clear film. Andreani fails to teach or suggest colored appearance and therefore fails to remedy the deficiencies of Melzig. In sum, neither Melzig nor Andreani, taken alone or in combination, teach or suggest each of the limitations of independent claim 1. Accordingly, Applicants respectfully maintain that claims 5, 7, 11 and 15 are patentable over Melzig and Andreani.

Claims 8-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Melzig. For the reasons set forth above, Applicants respectfully submit that Melzig fails to teach or suggest claims 8-9.

No fee, other than the three month extension fee is deemed necessary in connection with the filing of this Amendment. However, if any additional fee is required, the Examiner is hereby authorized to charge the amount of such fee to Deposit Account No. 19-4709.

Respectfully submitted,



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